

WHAT IS CLAIMED IS:

1. A swirl nozzle assembly connected to a water supplying pipe for supplying fire extinguishing water at a predetermined pressure, comprising:

5 a main body having one end which is threadedly coupled to the water supplying pipe to be held fastened in a direction where the fire extinguishing water is supplied and the other end which is internally threaded to form a coupling part;

 a filter positioned in an accommodating space which is
10 defined inward of the coupling part of the main body, to filter foreign substances contained in the fire extinguishing water;

 a nozzle receiving element having one end which is threadedly coupled to the coupling part of the main body with the filter fixedly maintained inward of the coupling part, and
15 the other end which is internally threaded to form a nozzle coupling part, the nozzle receiving element being defined with a water collecting chamber; and

 a swirl nozzle threadedly coupled to the nozzle coupling part of the nozzle receiving element and structured to allow
20 water droplets of a predetermined size to be sprayed at a predetermined scattering angle.

2. The swirl nozzle assembly as set forth in claim 1, wherein the filter has a mesh size which is less than a

diameter of a swirl guide hole of the swirl nozzle.

3. A swirl nozzle connected to a water supplying pipe for supplying fire extinguishing water at a predetermined pressure,
5 comprising:

a nozzle body formed on an outer surface thereof with an external thread which is to be airtightly screwed into the water supplying pipe, and defined with a swirl space for swirling movement of the fire extinguishing water;

10 a flow resistance-reducing part protruding upward from an upper end of the nozzle body while being separated from an inner surface of the water supplying pipe by a predetermined distance, and having a semi-spherical configuration to reduce water flow resistance when fire extinguishing water is
15 introduced into the swirl space;

at least one swirl guide hole defined between the flow resistance-reducing part and the nozzle body in a manner such that it extends in a tangential direction with respect to an inner surface of the nozzle body to cause swirl flow of the
20 fire extinguishing water; and

a spraying element airtightly screwed at an upper end thereof into a lower end of the nozzle body and having an inner diameter which is gradually decreased toward a spraying hole defined at a lower end thereof.